

SEQUENCE LISTING

<110> Allen, Stephen M.
<110> Hitz, William D.
<110> Rafalski, J. Antoni

<120> SUCROSE TRANSPORT PROTEINS

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<150> 60/081,148
<151> April 9, 1998

<150> PCT/US99/07562
<151> April 7, 1999

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<212> PRT
<213> Zea mays

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Arg Leu Ile Leu Ala Gly Met Val Ala Gly Gly Val Gln Tyr Gly Trp
35 40 45
Ala Leu Gln Leu Ser Leu Leu Thr Pro Tyr Val Gln Thr Leu Gly Leu
50 55 60
Ser His Ala Leu Thr Ser Phe Met Trp Leu Cys Gly Pro Ile Ala Gly
65 70 75 80
Leu Val Val Gln Pro Leu Val Gly Leu Tyr Ser Asp Arg Cys Thr Ser
85 90 95
Arg Trp Gly Arg Arg Arg Pro Phe Ile Leu Thr Gly Cys Met Leu Ile
100 105 110
Cys Val Ala Val Ile Val Val Gly Phe Ser Ser Asp Ile Gly Ala Ala
115 120 125
Leu Gly Asp Thr Lys Glu His Cys Ser Leu Tyr His Gly Pro Arg Trp
130 135 140
His Ala Ala Ile Val Tyr Val Leu Gly Phe Trp Leu Leu Asp Phe Ser
145 150 155 160
Asn Asn Thr Val Gln Gly Pro Ala Arg Ala Met Met Ala Asp Leu Cys
165 170 175
Asp His His Gly Pro Ser Ala Ala Asn Ser Ile Phe Cys Ser Trp Met
180 185 190
Ala Leu Gly Asn Ile Leu Gly Tyr Ser Ser Gly Ser Thr Asn Asn Trp
195 200 205
His Lys Trp Phe Pro Phe Leu Lys Thr Ser Ala Cys Cys Glu Ala Cys
210 215 220
Ala Asn Leu Lys Gly Ala Phe Leu Val Ala Val Val Phe Leu Val Leu
225 230 235 240
Cys Leu Thr Val Thr Leu Ile Phe Ala Lys Glu Val Pro Tyr Arg Ala
245 250 255
Asn Glu Asn Leu Pro Thr Thr Lys Ala Gly Gly Glu Val Glu Thr Glu
260 265 270
Pro Thr Gly Pro Leu Ala Val Leu Lys Gly Phe Lys Asp Leu Pro Pro
275 280 285
Gly Met Pro Ser Val Leu Leu Val Thr Ala Ile Thr Trp Leu Ser Trp
290 295 300

Phe Pro Phe Ile Leu Tyr Asp Thr Asp Trp Met Gly Arg Glu Ile Tyr
305 310 315 320

His Gly Asp Pro Lys Gly Ser Asn Ala Gln Ile Ser Ala Phe Asn Glu
325 330 335

Gly Val Arg Val Gly Ala Phe Gly Leu Leu Leu Asn Ser Val Ile Leu
340 345 350

Gly Phe Ser Ser Phe Leu Ile Glu Pro Met Cys Arg Lys Val Gly Pro
355 360 365

Arg Val Val Trp Val Thr Ser Asn Phe Met Val Cys Val Ala Met Ala
370 375 380

Ala Thr Ala Leu Ile Ser Phe Trp Ser Leu Arg Asp Tyr His Gly Tyr
385 390 395 400

Val Gln Asp Ala Ile Thr Ala Asn Ala Ser Ile Lys Ala Val Cys Leu
405 410 415

Val Leu Phe Ala Phe Leu Gly Val Pro Leu Ala Ile Leu Tyr Ser Val
420 425 430

Pro Phe Ala Val Thr Ala Gln Leu Ala Ala Thr Arg Gly Gly Gln
435 440 445

Gly Leu Cys Thr Gly Val Leu Asn Ile Ser Ile Val Ile Pro Gln Val
450 455 460

Ile Ile Ala Leu Gly Ala Gly Pro Trp Asp Ala Leu Phe Gly Lys Gly
465 470 475 480

Asn Ile Pro Ala Phe Gly Val Ala Ser Ala Phe Ala Leu Val Gly Gly
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Ala Val Ser Ala Gly Gly His
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<211> 825

<212> DNA

<213> Zea mays

<400> 3

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Phe Ser Leu Leu Gly Leu Pro Leu Ser Ile Thr Tyr Ser Val Pro Phe
 35 40 45

Ser Val Thr Ala Glu Leu Thr Ala Gly Thr Gly Gly Gln Gly Leu
 50 55 60

Ala Thr Gly Val Leu Asn Leu Ala Ile Val Val Pro Gln Ile Val Val
 65 70 75 80

Ser Leu Gly Ala Gly Pro Trp Asp Ala Leu Tyr Gly Gly Asn Thr
 85 90 95

Pro Ala Phe Val Leu Ala Ser Val Phe Ser Leu Ala Ala Gly Val Leu
 100 105 110

Ala Val Leu Lys Leu Pro Lys Leu Ser Asn Ser Tyr Gln Ser Ala Gly
 115 120 125

Phe His Gly Phe Gly
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 <213> Zea mays

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<211> 497
<212> PRT
<213> Zea mays

<400> 6
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Leu Leu Thr Pro Tyr Val Gln Thr Leu Gly Leu Ser His Ala Leu Thr
35 40 45
Ser Phe Met Trp Leu Cys Gly Pro Ile Ala Gly Leu Val Val Gln Pro
50 55 60
Leu Val Gly Leu Tyr Ser Asp Arg Cys Thr Ala Arg Trp Gly Arg Arg
65 70 75 80
Arg Pro Phe Ile Leu Ile Gly Cys Met Leu Ile Cys Leu Ala Val Ile
85 90 95
Val Val Gly Phe Ser Ser Asp Ile Gly Ala Ala Leu Gly Asp Thr Lys
100 105 110
Glu His Cys Ser Leu Tyr His Gly Pro Arg Trp His Ala Ala Ile Val
115 120 125
Tyr Val Leu Gly Phe Trp Leu Leu Asp Phe Ser Asn Asn Thr Val Gln
130 135 140
Gly Pro Ala Arg Ala Met Met Ala Asp Leu Cys Gly His His Gly Pro
145 150 155 160
Ser Ala Ala Asn Ser Ile Phe Cys Ser Trp Met Ala Leu Gly Asn Ile
165 170 175
Leu Gly Tyr Ser Ser Gly Ser Thr Asn Asn Trp His Lys Trp Phe Pro
180 185 190
Phe Leu Met Thr Asn Ala Cys Cys Glu Ala Cys Ala Asn Leu Lys Gly
195 200 205
Ala Phe Leu Val Ala Val Val Phe Leu Ile Met Cys Leu Thr Ile Thr
210 215 220
Leu Phe Phe Ala Lys Glu Val Pro Tyr Arg Gly Asn Gln Asn Leu Pro
225 230 235 240
Thr Lys Ala Asn Gly Glu Val Glu Thr Glu Pro Ser Gly Pro Leu Ala
245 250 255

Val Leu Lys Gly Phe Lys Asn Leu Pro Thr Gly Met Pro Ser Val Leu
 260 265 270
 Leu Val Thr Gly Leu Thr Trp Leu Ser Trp Phe Pro Phe Ile Leu Tyr
 275 280 285
 Asp Thr Asp Trp Met Gly Arg Glu Ile Tyr His Gly Asp Pro Lys Gly
 290 295 300
 Ser Asn Ala Gln Ile Ser Ala Phe Asp Glu Gly Val Arg Val Gly Ser
 305 310 315 320
 Phe Gly Leu Leu Leu Asn Ser Ile Val Leu Gly Phe Ser Ser Phe Leu
 325 330 335
 Ile Glu Pro Met Cys Arg Lys Val Gly Pro Arg Val Val Trp Val Thr
 340 345 350
 Ser Asn Phe Met Val Cys Val Ala Met Ala Ala Thr Ala Leu Ile Ser
 355 360 365
 Phe Trp Ser Leu Lys Asp Tyr His Gly Tyr Val Gln Asp Ala Ile Thr
 370 375 380
 Ala Ser Thr Ser Ile Lys Ala Val Cys Leu Val Leu Phe Ala Phe Leu
 385 390 395 400
 Gly Val Pro Leu Ala Ile Leu Tyr Ser Val Pro Phe Ala Val Thr Ala
 405 410 415
 Gln Leu Ala Ala Thr Lys Gly Gly Gln Gly Leu Cys Thr Gly Val
 420 425 430
 Leu Asn Ile Ser Ile Val Ile Pro Gln Val Ile Ile Ala Leu Gly Ala
 435 440 445
 Gly Pro Trp Asp Ala Leu Phe Gly Lys Gly Asn Ile Pro Ala Phe Gly
 450 455 460
 Val Ala Ser Gly Phe Ala Leu Ile Gly Gly Val Val Gly Val Phe Leu
 465 470 475 480
 Leu Pro Lys Ile Ser Lys Arg Gln Phe Arg Ala Val Ser Ala Gly Gly
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<210> 7
 <211> 1653
 <212> DNA
 <213> Oryza sativa

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<210> 8
 <211> 400
 <212> PRT
 <213> Oryza sativa

<400> 8
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 Thr Arg Leu Gly Ala Ile Ile Val Tyr Leu Val Gly Phe Trp Leu Leu
 35 40 45

 Asp Val Gly Asn Asn Ala Thr Gln Gly Pro Cys Arg Ala Phe Leu Ala
 50 55 60

 Asp Leu Thr Glu Asn Asp Pro Arg Arg Thr Arg Ile Ala Asn Ala Tyr
 65 70 75 80

 Phe Ser Leu Phe Met Ala Leu Gly Asn Ile Leu Gly Tyr Ala Thr Gly
 85 90 95

 Ala Tyr Ser Gly Trp Tyr Lys Ile Phe Pro Phe Thr Val Thr Pro Ser
 100 105 110

 Cys Ser Ile Ser Cys Ala Asn Phe Lys Ser Ala Phe Leu Leu Asp Ile
 115 120 125

 Ile Ile Leu Val Val Thr Thr Cys Ile Thr Val Ala Ser Val Gln Glu
 130 135 140

 Pro Gln Ser Phe Gly Ser Asp Glu Ala Asp His Pro Ser Thr Glu Gln
 145 150 155 160

 Glu Ala Phe Leu Trp Glu Leu Phe Gly Ser Phe Arg Tyr Phe Thr Leu
 165 170 175

 Pro Val Trp Met Val Leu Ile Val Thr Ala Leu Thr Trp Ile Gly Trp
 180 185 190

 Phe Pro Phe Ile Leu Phe Asp Thr Asp Trp Met Gly Arg Glu Ile Tyr
 195 200 205

Arg Gly Ser Pro Asp Asp Pro Ser Ile Thr Gln Ser Tyr His Asp Gly
210 215 220

Val Arg Met Gly Ser Phe Gly Leu Met Leu Asn Ser Val Leu Leu Gly
225 230 235 240

Phe Thr Ser Ile Val Leu Glu Lys Leu Cys Arg Lys Trp Gly Ala Gly
245 250 255

Leu Val Trp Gly Val Ser Asn Ile Leu Met Ala Leu Cys Phe Val Ala
260 265 270

Met Leu Val Ile Thr Tyr Val Ala Lys Asn Met Asp Tyr Pro Pro Ser
275 280 285

Gly Val Pro Pro Thr Gly Ile Val Ile Ala Ser Leu Val Val Phe Thr
290 295 300

Ile Leu Gly Ala Pro Leu Ala Ile Thr Tyr Ser Ile Pro Tyr Ala Met
305 310 315 320

Ala Ala Ser Arg Val Glu Asn Leu Gly Leu Gly Gln Gly Leu Ala Met
325 330 335

Gly Ile Leu Asn Leu Ala Ile Val Ile Pro Gln Val Ile Val Ser Leu
340 345 350

Gly Ser Gly Pro Trp Asp Gln Leu Phe Gly Gly Asn Ala Pro Ala
355 360 365

Phe Ala Val Ala Ala Ala Ser Phe Ile Gly Gly Leu Val Ala Ile
370 375 380

Leu Gly Leu Pro Arg Ala Arg Ile Ala Ser Arg Arg Arg Gly His Arg
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<210> 9

<211> 2375

<212> DNA

<213> Oryza sativa

<400> 9

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 actttagtacatg atctgtggg ttccatggat ttggctgagc agaacaaccag ccgcattgtg 2040
 tgtaacatttggaaatccatggatccatcggtt acagtggaaat gattttttttt 2100
 acctactact acaacagaat aagctgaaaaa gatagagattt agatagaga gctaggtaac 2160
 tagtccagtt aggttgatgtt gcataacaagg caattggaaatgttaagagc tttatctact 2220
 ttttgacag aaaaatgtaa gctctggcc aatgacatgg cggatagattt ttacaatggaa 2280
 tggtaatcatg tactatataaacacgtttt ggtcacagct tgccaaatgtt catgtatagt 2340
 actgctacta aaaaaaaaaaaaaaaa aaaaaaaaaaaaaaaa 2375

<210> 10
 <211> 667
 <212> PRT
 <213> Oryza sativa

<400> 10
 Pro Ala Pro Ser Pro Arg Glu Ala Asp Gln Arg Ile Asn Gln Thr His
 1 5 10 15
 Lys His Thr Thr Arg Thr Gln Gln Gly Arg Arg Gln Phe Pro Ile
 20 25 30
 Leu Pro Arg Pro Ala Ser Pro Arg Leu Ser Leu Thr Leu Gln Thr Pro
 35 40 45
 Thr Ser Asp Ala Ala Ser Leu Ala Pro Cys Pro Arg Arg Ser His Gln
 50 55 60
 Thr Leu Pro Asp Leu Arg Pro Ala Met Asp Ser Ala Ala Gly Gly Gly
 65 70 75 80
 Gly Leu Thr Ala Ile Arg Leu Pro Tyr Arg His Leu Arg Asp Ala Glu
 85 90 95
 Met Glu Leu Val Ser Leu Asn Gly Gly Thr Pro Arg Gly Gly Ser Pro
 100 105 110
 Lys Asp Pro Asp Ala Thr His Gln Gln Gly Pro Pro Ala Ala Arg Thr
 115 120 125
 Thr Thr Thr Arg Lys Leu Val Leu Ala Cys Met Val Ala Ala Gly Val
 130 135 140
 Gln Phe Gly Trp Ala Leu Gln Leu Ser Leu Leu Thr Pro Tyr Ile Gln
 145 150 155 160
 Thr Leu Gly Ile Asp His Ala Met Ala Ser Phe Ile Trp Leu Cys Gly
 165 170 175
 Pro Ile Thr Gly Phe Val Val Gln Pro Cys Val Gly Val Trp Ser Asp
 180 185 190
 Lys Cys Arg Ser Lys Tyr Gly Arg Arg Arg Pro Phe Ile Leu Ala Gly
 195 200 205

Cys Leu Met Ile Cys Phe Ala Val Thr Leu Ile Gly Phe Ser Ala Asp
210 215 220

Leu Gly Tyr Ile Leu Gly Asp Thr Thr Glu His Cys Ser Thr Tyr Lys
225 230 235 240

Gly Ser Arg Phe Arg Ala Ala Ile Ile Phe Val Leu Gly Phe Trp Met
245 250 255

Leu Asp Leu Ala Asn Asn Thr Val Gln Gly Pro Ala Arg Ala Leu Leu
260 265 270

Ala Asp Leu Ser Gly Pro Asp Gln Cys Asn Ser Ala Asn Ala Ile Phe
275 280 285

Cys Thr Trp Met Ala Val Gly Asn Val Leu Gly Phe Ser Ser Gly Ala
290 295 300

Ser Gly Asn Trp His Lys Trp Phe Pro Phe Leu Met Thr Arg Ala Cys
305 310 315 320

Cys Glu Ala Cys Ser Asn Leu Lys Ala Ala Phe Leu Val Ala Val Val
325 330 335

Phe Leu Leu Phe Cys Met Ser Val Thr Leu Tyr Phe Ala Glu Glu Ile
340 345 350

Pro Leu Glu Pro Thr Asp Ala Gln Arg Leu Ser Asp Ser Ala Pro Leu
355 360 365

Leu Asn Gly Ser Arg Asp Asp Asn Asn Ala Ser Asn Glu Pro Arg Asn
370 375 380

Gly Ala Leu Pro Asn Gly His Thr Asp Gly Ser Asn Val Pro Ala Asn
385 390 395 400

Ser Asn Ala Glu Asp Ser Asn Ser Asn Arg Glu Asn Val Glu Val Phe
405 410 415

Asn Asp Gly Pro Gly Ala Val Leu Val Asn Ile Leu Thr Ser Met Arg
420 425 430

His Leu Pro Pro Gly Met Tyr Ser Val Leu Leu Val Met Ala Leu Thr
435 440 445

Trp Leu Ser Trp Phe Pro Phe Phe Leu Phe Asp Thr Asp Trp Met Gly
450 455 460

Arg Glu Val Tyr His Gly Asp Pro Asn Gly Asn Leu Ser Glu Arg Lys
465 470 475 480

Ala Tyr Asp Asn Gly Val Arg Glu Gly Ala Phe Gly Leu Leu Leu Asn
485 490 495

Ser Val Val Leu Gly Ile Gly Ser Phe Leu Val Asp Pro Leu Cys Arg
500 505 510

Leu Met Gly Ala Arg Leu Val Trp Ala Ile Ser Asn Phe Thr Val Phe
515 520 525

Ile Cys Met Leu Ala Thr Ala Ile Leu Ser Trp Ile Ser Phe Asp Leu
530 535 540

Tyr Ser Ser Lys Leu His His Ile Ile Gly Ala Asn Lys Thr Val Lys
 545 550 555 560
 Asn Ser Ala Leu Ile Val Phe Ser Leu Leu Gly Leu Pro Leu Ser Ile
 565 570 575
 Thr Tyr Ser Val Pro Phe Ser Val Thr Ala Glu Leu Thr Ala Gly Thr
 580 585 590
 Gly Gly Gly Gln Gly Leu Ala Thr Gly Val Leu Asn Leu Ala Ile Val
 595 600 605
 Val Pro Gln Ile Val Val Ser Leu Gly Ala Gly Pro Trp Asp Ala Leu
 610 615 620
 Phe Gly Gly Gly Asn Val Pro Ala Phe Ala Leu Ala Ser Val Phe Ser
 625 630 635 640
 Leu Gly Ala Gly Val Leu Ala Val Leu Lys Leu Pro Lys Leu Pro Asn
 645 650 655
 Ser Tyr Arg Ser Ala Gly Phe His Gly Phe Gly
 660 665

<210> 11
 <211> 1885
 <212> DNA
 <213> Glycine max

<400> 11
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 ttacgcaaaa tgatttttgtt gtcgtcaatg gcggccggta tccaattcgg gtgggcctca 180
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 gacaacctga cccaaaagac tcggccacgt gcagtggcga tcttcgtat cgggttttgg 480
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 gctgccgggg atgagaaaaa gacaaggca gccaatgcct tcttcctctt cttcatggcc 600
 gtcggcaaca tcctgggcta tgctgcggga tcctacgcgcg gcctccaccg cctttccccc 660
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 gctatgtcc tcctgggtt cctcaccacc ttgggtctga ttaccgtgaa agaaactccc 780
 tacacgcca aggagagaa gaaaaccgaa gatgcagaga agacacactt ctcgtgttc 840
 tgccgagaac tttgtcttgc attcaagggg ctgaaggagc caatgtggat gttgatgttg 900
 gtgaccgccc tgaactggat agcgtggttc cttacttct tggcgcac acgtggatg 960
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 aaccctgctt tggatggaa ccctccctc ggtatcaaag tggatgttcat gttttttt 1260
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 gggaaacttgc ctgcattcggtt gttgggtgcg gtggccgcgc tcgtgatgtc aatattatgc 1500
 gtttctctgc tgccaaactccaa aagaaagctt gatggatgtca gggatgttcat gttttttt 1560
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 ggtttagac atggatgttgcgtt gatgcatttgcgtt tagccactt atgttcaagg acaatcattt 1740
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 tatttgcatttgcgtt aaaaaaaaaaaaaaaa aaaaaaaa 1885

<210> 12
 <211> 494
 <212> PRT
 <213> Glycine max

<400> 12
 Met Glu Glu Pro Gln Pro Gly Pro Ser Pro Leu Arg Lys Met Ile Leu
 1 5 10 15

Val Ser Ser Met Ala Ala Gly Ile Gln Phe Gly Trp Ala Leu Gln Leu
 20 25 30

Ser Leu Leu Thr Pro Tyr Val Gln Thr Leu Gly Val Pro His Ala Trp
 35 40 45

Ala Ser Phe Ile Trp Leu Cys Gly Pro Ile Ser Gly Leu Leu Val Gln
 50 55 60

Pro Ile Val Gly Tyr Ser Ser Asp Arg Cys Gln Ser Arg Phe Gly Arg
 65 70 75 80

Arg Arg Pro Phe Ile Leu Ala Gly Ser Leu Ala Val Ala Ile Ala Val
 85 90 95

Phe Leu Ile Gly Tyr Ala Ala Asp Ile Gly His Ala Ala Gly Asp Asn
 100 105 110

Leu Thr Gln Lys Thr Arg Pro Arg Ala Val Ala Ile Phe Val Ile Gly
 115 120 125

Phe Trp Ile Leu Asp Val Ala Asn Asn Met Leu Gln Gly Pro Cys Arg
 130 135 140

Ala Phe Leu Gly Asp Leu Ala Ala Gly Asp Glu Lys Lys Thr Lys Ala
 145 150 155 160

Ala Asn Ala Phe Phe Ser Phe Phe Met Ala Val Gly Asn Ile Leu Gly
 165 170 175

Tyr Ala Ala Gly Ser Tyr Asp Gly Leu His Arg Leu Phe Pro Phe Thr
 180 185 190

Glu Thr Glu Ala Cys Asn Val Phe Cys Ala Asn Leu Lys Ser Cys Phe
 195 200 205

Phe Phe Ala Ile Val Leu Leu Val Val Leu Thr Thr Leu Val Leu Ile
 210 215 220

Thr Val Lys Glu Thr Pro Tyr Thr Pro Lys Ala Glu Lys Glu Thr Glu
 225 230 235 240

Asp Ala Glu Lys Thr His Phe Ser Cys Phe Cys Gly Glu Leu Cys Leu
 245 250 255

Ala Phe Lys Gly Leu Lys Arg Pro Met Trp Met Leu Met Leu Val Thr
 260 265 270

Ala Val Asn Trp Ile Ala Trp Phe Pro Tyr Phe Leu Phe Asp Thr Asp
 275 280 285

Trp Met Gly Arg Glu Val Tyr Gly Gly Asp Val Gly Gln Lys Ala Tyr
 290 295 300

Asp Ser Gly Val His Ala Gly Ser Leu Gly Leu Met Leu Asn Ala Val
 305 310 315 320
 Val Leu Ala Val Met Ser Leu Ala Ile Glu Pro Leu Gly Arg Val Val
 325 330 335
 Gly Gly Ile Lys Trp Leu Trp Gly Ile Val Asn Ile Leu Leu Ala Ile
 340 345 350
 Cys Leu Gly Met Thr Val Leu Ile Thr Lys Ile Ala Glu His Glu Arg
 355 360 365
 Leu Leu Asn Pro Ala Leu Val Gly Asn Pro Ser Leu Gly Ile Lys Val
 370 375 380
 Gly Ser Met Val Phe Phe Ser Val Leu Gly Ile Pro Leu Ala Ile Thr
 385 390 395 400
 Phe Ser Val Pro Phe Ala Leu Ala Ser Ile Tyr Ser Ser Thr Ser Gly
 405 410 415
 Ala Gly Gln Gly Leu Ser Leu Gly Val Leu Asn Ile Ala Ile Val Val
 420 425 430
 Pro Gln Met Ile Val Ser Thr Ile Ser Gly Pro Trp Asp Ala Leu Phe
 435 440 445
 Gly Gly Gly Asn Leu Pro Ala Phe Val Leu Gly Ala Val Ala Ala Val
 450 455 460
 Val Ser Ala Ile Leu Ala Val Leu Leu Leu Pro Thr Pro Lys Lys Ala
 465 470 475 480
 Asp Glu Val Arg Ala Ser Ser Leu Asn Met Gly Ser Leu His
 485 490
 <210> 13
 <211> 1041
 <212> DNA
 <213> Glycine max
 <220>
 <221> unsure
 <222> (1007)
 <400> 13
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 cggaggccag tcccctccgg aagatcatgg tggtgccctc catcgccgccc ggggtgcaat 180
 tcgggtgggc cctacagctc tctctactta ccccttagt ccaactgctg gggattcccc 240
 acacttgggc cgccttcata tggctctgcg gcccaatctc cggcatgctc gtccagccca 300
 tcgtggata ccacagcgac cgctgcaccc cccgcttcgg ccgcgcgcgc cccttcatacg 360
 cccgcggctc cctcgccgat gccatgcgg ttttccttat cggctacgccc gccgaccccg 420
 gccacatgtt cggcgactcc ctagccaaa aaaccgcggcc ggcgcgcgc atttcggtt 480
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 tgggcgaccc ctgcgcggaa gaacaacggg aaacgcggaa cgcaacgcgc ttcttctcc 600
 tcttcatggc cgtcgaaac gtcctgggtt acgcgcgcgg ctcttacagc ggcctccaca 660
 acgtcttccc tttcaactaaa acaaaagcat gtgtatgttta ctgcgcgaat ttgaagagtt 720
 gtttcttccct ctccatcgcc cttctctca ctctctccac aatgcgcctt acctacgtga 780
 aggagaaaaac ggtgtcgatca gagaaaaacgg tgaggaggc ggtggaggag gatgggtccc 840
 acggggggcat gccgtgcattc gggcaattat tcggtgccgtt ccgcgaactg aagcgtccca 900
 tggatctt cttgttgggtt acgtgtctga actgggatgtt cctgggttccct tttttgttat 960
 tcgacaccga ctgggattgg ggcgtgaggt gtacggaggaaaaaatnnggg gaaaggaaag 1020
 ggtacgataa ggggttccgt t 1041

<210> 14
<211> 322
<212> PRT
<213> Glycine max

<220>
<221> UNSURE
<222> (311)

<220>
<221> UNSURE
<222> (321)

<400> 14

Met Glu Pro Leu Ser Ser Thr Lys His Asn Asn Asn Leu Ser Lys Pro
1 5 10 15

Ser Ser Leu His Thr Glu Ala Pro Pro Pro Glu Ala Ser Pro Leu Arg
20 25 30

Lys Ile Met Val Val Ala Ser Ile Ala Ala Gly Val Gln Phe Gly Trp
35 40 45

Ala Leu Gln Leu Ser Leu Leu Thr Pro Tyr Val Gln Leu Leu Gly Ile
50 55 60

Pro His Thr Trp Ala Ala Phe Ile Trp Leu Cys Gly Pro Ile Ser Gly
65 70 75 80

Met Leu Val Gln Pro Ile Val Gly Tyr His Ser Asp Arg Cys Thr Ser
85 90 95

Arg Phe Gly Arg Arg Arg Pro Phe Ile Ala Ala Gly Ser Leu Ala Val
100 105 110

Ala Ile Ala Val Phe Leu Ile Gly Tyr Ala Ala Asp Leu Gly His Met
115 120 125

Phe Gly Asp Ser Leu Ala Lys Lys Thr Ala Pro Arg His Arg Ile Phe
130 135 140

Val Val Gly Phe Trp Ile Leu Asp Val Ala Asn Asn Met Leu Gln Gly
145 150 155 160

Pro Cys Arg Ala Leu Leu Gly Asp Leu Cys Ala Gly Glu Gln Arg Lys
165 170 175

Thr Arg Asn Ala Asn Ala Phe Phe Ser Phe Phe Met Ala Val Gly Asn
180 185 190

Val Leu Gly Tyr Ala Ala Gly Ser Tyr Ser Gly Leu His Asn Val Phe
195 200 205

Pro Phe Thr Lys Thr Lys Ala Cys Asp Val Tyr Cys Ala Asn Leu Lys
210 215 220

Ser Cys Phe Phe Leu Ser Ile Ala Leu Leu Leu Thr Leu Ser Thr Ile
225 230 235 240

Ala Leu Thr Tyr Val Lys Glu Lys Thr Val Ser Ser Glu Lys Thr Val
245 250 255

Arg Ser Ser Val Glu Glu Asp Gly Ser His Gly Gly Met Pro Cys Phe
260 265 270

Gly Gln Leu Phe Gly Ala Phe Arg Glu Leu Lys Arg Pro Met Trp Ile
275 280 285

Leu Leu Leu Val Thr Cys Leu Asn Trp Asp Cys Leu Val Pro Phe Leu
290 295 300

Leu Phe Asp Thr Asp Trp Xaa Gly Arg Glu Val Tyr Gly Gly Lys Ile
305 310 315 320

Xaa Gly

<210> 15

<211> 578

<212> DNA

<213> Vernonia mespilifolia

<400> 15

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acgttgcggc acggtagcaa aaccgcgttgc acccaggcg ggcacattaa agccgggtgct 180
ttgtcaattt ttgcgcgtcct cggtgccca ctagctgtga ctttcagtggt tccatgtgct 240
cttgcatcaa tattttctaa cagttcagga gctggacaag gtctatcaact tgggttttg 300
aatctagcaa tcgtcatacc acagatgttc gtatcagtgac taagtggacc atgggacgca 360
ctgttcggcg gtggaaactt accagcattt gtgggtggag caattcggc tgcaagtaagt 420
gggatattat cgttcaccat gcttccttcg ccaccccccag atgtcgtaact ttcaaagggtt 480
tccggaggtg ggatgcattt gagagataat aactgccact caacacgtcc cgattgtgtc 540
agattgggac atttaggacc aaaaaaaaaa aaaaaaaaaa 578

<210> 16

<211> 166

<212> PRT

<213> Vernonia mespilifolia

<400> 16

Ala Arg Gly Trp Leu Gly Gly Val Lys Arg Leu Trp Gly Gly Ile Asn
1 5 10 15

Phe Leu Leu Ala Val Cys Leu Ala Met Thr Val Val Val Thr Lys Met
20 25 30

Ala Asp Ser Glu Arg Gln Phe Lys Thr Leu Pro Asp Gly Ser Lys Thr
35 40 45

Ala Leu Pro Pro Gly Gly Asp Ile Lys Ala Gly Ala Leu Ser Ile Phe
50 55 60

Ala Val Leu Gly Ala Pro Leu Ala Val Thr Phe Ser Val Pro Cys Ala
65 70 75 80

Leu Ala Ser Ile Phe Ser Asn Ser Ser Gly Ala Gly Gln Gly Leu Ser
85 90 95

Leu Gly Val Leu Asn Leu Ala Ile Val Ile Pro Gln Met Phe Val Ser
100 105 110

Val Leu Ser Gly Pro Trp Asp Ala Leu Phe Gly Gly Asn Leu Pro
115 120 125

Ala Phe Val Val Gly Ala Ile Ser Ala Ala Val Ser Gly Ile Leu Ser
130 135 140

Phe Thr Met Leu Pro Ser Pro Pro Pro Asp Val Val Leu Ser Lys Val
145 150 155 160

Ser Gly Gly Gly Met His
165

<210> 17
<211> 1062
<212> DNA
<213> Triticum aestivum

<400> 17
ctggaatgcc gtcagtgtct ctcgtcaccc gcctcacctg gctgtcctgg ttccccttca 60
tcctgtacga caccgactgg atgggtcgta agatctacca cggtgacccc aagggaaccc 120
ccgacgaggc caacgcgttc caggcaggtg tcagggccgg ggcgttcggc ctgctactca 180
actcggtcgt cctggggttc agctcgttcc tgatcgagcc gctgtgcaag aggctaggcc 240
cgcggttgtt gtgggtgtca agcaacttcc tcgtctgcat ctccatggcc gccatggca 300
tcataagctg gtggggccact caggacactgc atgggtacat ccagcacgccc atcaccgcca 360
gcaaggagat caagatcgtc tccctcgccc tcttcgcctt cctcggaaatc cctctcgcca 420
ttctgtacag tgcgttttc gcggtgacgg cgcagctggc ggcgaacaga ggcgtggcc 480
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tggggcggg gccgtgggac gagctgttcg gcaaggggcaa catcccgccg ttcggcgtgg 600
cgtccgcctt cgcgctcatc ggcggcatcg tcggcatatt cctgtgtccc aagatctcca 660
ggcgcgcgtt ccggggccgtc agcggcggcg gtcactgacc ggcgcgcgcg ccggcgtggcc 720
tgagcatggc gaaggccgtat cgcgcggcc cgaagggtccc agcccaatc ggcatttacc 780
aaattttcgc ataggcgtaa cttaggggtc ctgccttaag gactccgtag agcagaataa 840
gaatttgtgag gaacctgtat gtgttgtgtc tgtagtgcg tgtaagttag tgcgtgttagc 900
ggaaaatgga cagaggaatg cgggcattcca tcgcccggctg ggggtgcgtc tttgggtgt 960
gacttgtgtg tagcaaacc aaggtatcaa gtgagggaa aagaatggat gatgaacttt 1020
cagcgacaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aa 1062

<210> 18
<211> 232
<212> PRT
<213> Triticum aestivum

<400> 18
Ala Gly Met Pro Ser Val Leu Leu Val Thr Gly Leu Thr Trp Leu Ser
1 5 10 15

Trp Phe Pro Phe Ile Leu Tyr Asp Thr Asp Trp Met Gly Arg Glu Ile
20 25 30

Tyr His Gly Asp Pro Lys Gly Thr Pro Asp Glu Ala Asn Ala Phe Gln
35 40 45

Ala Gly Val Arg Ala Gly Ala Phe Gly Leu Leu Leu Asn Ser Val Val
50 55 60

Leu Gly Phe Ser Ser Phe Leu Ile Glu Pro Leu Cys Lys Arg Leu Gly
65 70 75 80

Pro Arg Val Val Trp Val Ser Ser Asn Phe Leu Val Cys Ile Ser Met
85 90 95

Ala Ala Ile Cys Ile Ile Ser Trp Trp Ala Thr Gln Asp Leu His Gly
100 105 110

Tyr Ile Gln His Ala Ile Thr Ala Ser Lys Glu Ile Lys Ile Val Ser
115 120 125

Leu Ala Leu Phe Ala Phe Leu Gly Ile Pro Leu Ala Ile Leu Tyr Ser
130 135 140

Val Pro Phe Ala Val Thr Ala Gln Leu Ala Ala Asn Arg Gly Gly Gly
145 150 155 160

Gln Gly Leu Cys Thr Gly Val Leu Asn Ile Ala Ile Val Ile Pro Gln
165 170 175

Val Ile Ile Ala Val Gly Ala Gly Pro Trp Asp Glu Leu Phe Gly Lys
180 185 190

Gly Asn Ile Pro Ala Phe Gly Val Ala Ser Ala Phe Ala Leu Ile Gly
195 200 205

Gly Ile Val Gly Ile Phe Leu Leu Pro Lys Ile Ser Arg Arg Gln Phe
210 215 220

Arg Ala Val Ser Gly Gly His
225 230

<210> 19

<211> 2083

<212> DNA

<213> Triticum aestivum

<400> 19

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ccgtcctgcc cctagatctt tggccggca gggatacggc gtagaattga taggcgaacg 180
gacgagggtgg ttagtcggcag ggcggccctt ctgcctatggc gcgcggccggc ggcaacggcg 240
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aaccgcggcgt ggacatcagc ctcggcagac tcatacctcgc cggcatggc gccggccggc 360
tgcagttacgg atggggcgtc cagctctccc tgctcacccc ctacgtccag actctgggac 420
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ttattctgac aggatgcata ctcatctgca ttgctgttgt ggtctcgcc ttctcggtc 600
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caaattcaat cttctgttct tggatggcgc tagggaaatat ctttggatac tcctctgggt 840
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cgagggtccc agcccagccc gccatttacc aaattttcgatc ataggcgatc ctgggtggct 1860
ctcgccctaag gactccgttag agcagaataa gaattgttagt gaaacctgtat tgggtgtgtc 1920
tgtatgtcg tggtaagtca gtcgtgttagc gaaaaatggc cagaggttgc tggcatcca 1980
tcaccggctg ggggtgtcgat tttgggttgtt gacttggatc tagcaaaacca aggtgatcaa 2040
gtgaggggaa atgaatggat gatgaactt cagcgacaaa aaa 2083

<210> 20

<211> 522

<212> PRT

<213> Triticum aestivum

<400> 20

Met Ala Arg Gly Gly Gly Asn Gly Glu Val Glu Leu Ser Val Gly Val
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Gly Gly Gly Gly Gly Ala Ala Gly Gly Gly Glu Gln Pro Ala Val
20 25 30

Asp Ile Ser Leu Gly Arg Leu Ile Leu Ala Gly Met Val Ala Gly Gly
35 40 45

Val Gln Tyr Gly Trp Ala Leu Gln Leu Ser Leu Leu Thr Pro Tyr Val
50 55 60

Gln Thr Leu Gly Leu Ser His Ala Leu Thr Ser Phe Met Trp Leu Cys
65 70 75 80

Gly Pro Ile Ala Gly Leu Val Val Gln Pro Cys Val Gly Leu Tyr Ser
85 90 95

Asp Lys Cys Thr Ser Arg Trp Gly Arg Arg Arg Pro Phe Ile Leu Thr
100 105 110

Gly Cys Ile Leu Ile Cys Ile Ala Val Val Val Val Gly Phe Ser Ala
115 120 125

Asp Ile Gly Ala Gly Leu Gly Asp Ser Lys Glu Glu Cys Ser Leu Tyr
130 135 140

His Gly Pro Arg Trp His Ala Ala Ile Val Tyr Val Leu Gly Phe Trp
145 150 155 160

Leu Leu Asp Phe Ser Asn Asn Thr Val Gln Gly Pro Ala Arg Ala Leu
165 170 175

Met Ala Asp Leu Ser Ala Gln His Gly Pro Ser Ala Ala Asn Ser Ile
180 185 190

Phe Cys Ser Trp Met Ala Leu Gly Asn Ile Leu Gly Tyr Ser Ser Gly
195 200 205

Ser Thr Asn Asn Trp His Lys Trp Phe Pro Phe Leu Arg Thr Arg Ala
210 215 220

Cys Cys Glu Ala Cys Ala Asn Leu Lys Gly Ala Phe Leu Val Ala Val
225 230 235 240

Leu Val Leu Ala Phe Cys Leu Val Ile Thr Val Ile Phe Ala Lys Glu
245 250 255

Ile Pro Tyr Lys Ala Ile Ala Pro Leu Pro Thr Lys Gly Asn Gly Gln
260 265 270

Val Glu Val Glu Pro Thr Gly Pro Leu Ala Val Phe Lys Gly Phe Lys
275 280 285

Asn Leu Pro Pro Met Pro Ser Val Leu Leu Val Thr Gly Leu Thr Trp
290 295 300

Leu Ser Trp Phe Pro Phe Ile Leu Tyr Asp Thr Asp Trp Met Gly Arg
305 310 315 320

Glu Ile Tyr His Gly Asp Pro Lys Gly Thr Pro Asp Glu Ala Asn Ala
 325 330 335
 Phe Gln Ala Gly Val Arg Ala Gly Ala Phe Gly Leu Leu Leu Asn Ser
 340 345 350
 Val Val Leu Gly Phe Ser Ser Phe Leu Ile Glu Pro Leu Cys Lys Arg
 355 360 365
 Leu Gly Pro Arg Val Val Trp Val Ser Ser Asn Phe Leu Val Cys Leu
 370 375 380
 Ser Met Ala Ala Ile Cys Ile Ile Ser Trp Trp Ala Thr Gln Asp Leu
 385 390 395 400
 His Gly Tyr Ile Gln His Ala Ile Thr Ala Ser Lys Glu Ile Lys Ile
 405 410 415
 Val Ser Leu Ala Leu Phe Ala Phe Leu Gly Ile Pro Leu Ala Ile Leu
 420 425 430
 Tyr Ser Val Pro Phe Ala Val Thr Ala Gln Leu Ala Ala Lys Arg Gly
 435 440 445
 Gly Gly Gln Gly Leu Cys Thr Gly Val Leu Asn Ile Ala Ile Val Ile
 450 455 460
 Pro Gln Val Ile Ile Ala Val Gly Ala Gly Pro Trp Asp Glu Leu Phe
 465 470 475 480
 Gly Lys Gly Asn Ile Pro Ala Phe Gly Met Ala Ser Ala Phe Ala Leu
 485 490 495
 Ile Gly Gly Ile Val Gly Ile Phe Leu Leu Pro Lys Ile Ser Arg Arg
 500 505 510
 Gln Phe Arg Ala Val Ser Gly Gly His
 515 520

 <210> 21
 <211> 2160
 <212> DNA
 <213> Triticum aestivum

 <400> 21
 gcacgagacc acccctctct ctctctctca ctcgcgcttt ccgcctctcgat ctcctccct 60
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 cccgcgttga tccgacgcgc cgttagatgg ataggcgaaac gaacggggcg gtgatcgatcc 180
 gggcgcccccc cctgcgacga tggcgcgcgg cggcggcaac ggcgagggtgg agctctcggt 240
 ggggtcggc ggaggcggcg cggcgcggcgg cggggcggac gcccccgcc tggacatcag 300
 cctcggcagg ctatcctcg cggcatggt cggccggcggc gtgcagtacg gatgggcgtct 360
 ccagctctcc ctgctcaccct cctacgtcca gactctggga ctttcgcatg ctctgacttc 420
 attcatgtgg ctctgcggcc ctattgtgg attagtgggtt caaccatgcg ttgggctcta 480
 cagtgacaag tgcaactcaa gatgggaag acgcagaccc ttcatctga caggatgtat 540
 cctcatctgc attgtgtcg tggcgtcg cttctcggt gacattggag ctgctctggg 600
 tgacagcaag gaagagtgcg gtctctatca tggcgcgttggtggcgcgtgc caattgtgt 660
 tggatggc ttctggctcc ttgacttctc caacaacaca gtgcaaggac cagcgcgtgc 720
 tctgtatggct gatgtatcg cccagcatgg acccagtgcg gcaattcaa tcttcgttgc 780
 ttggatggca ctggaaata tcctaggata ctcatctggt tccacaacata actggcaca 840
 gtggtttccg ttccctccggaa caaggcttg ctgtgaaggac tgccaaatc tgaaaggcgc 900
 atttctggtg gcagtgcgtt tcctgcctt ctgtttgggtt ataaccgtga tcttcgttgc 960
 ggagataccg tacaaggcga ttgcggccct cccaaacaaag gccaatggcc aggttgaagt 1020
 cgagccacc gggccgctcg ccgttcaaa aggcttcaag aacttgccctc ctggatgcc 1080
 gtcagtgcgtc ctcgtcaccctg gcctcacctg gctgtcctgg ttcccttca tcctgtacga 1140

caccgactgg atgggtcgta agatctacca cggtaacccc aaggaaaccc cgcacgaggc 1200
 caacgcgttc caggcaggta tcagggccgg ggcgttcggc ctgtactca actcggtcgt 1260
 cctgggttcc agtcgttcc tgatcgagcc gctgtcaag aggttagggc cgcgggttgt 1320
 gtgggtgtca agcaacttcc tcgtctgcct ctccatggcc gccatttgcataaagctg 1380
 gtggggccact caggacactgc atgggtacat ccagcacgca atcaccgcca gcaaggagat 1440
 caagatcgta tcctcgccc tcttcgcctt cctcggaaatc ccttcgcctt ttctgtacag 1500
 tgcactttc gccgtgacgg cgcagctggc ggcgaacaga tgcgtggc aatggctgtg 1560
 cacgggcgtg ctgaacatcg ccatcgcat acccccaggta atcatcgct tggggccggg 1620
 gccgtgggac gagctgtcg gcaaggcaaa catcccgccg ttcggcgtgg cgtccgcctt 1680
 cgcgtcatc ggccgcattc tcggcatatt cctgtgcctt aagatctcca ggctccagtt 1740
 ccggccgtc agcggccggc gtcactgacc ggcggcgcg cgggtcgcc tgagcatggc 1800
 gaaggccgat cgcggccggc cgaaggcccc agcccagcgc ggcatttacc aaattttcgc 1860
 ataggcgtaa ctagggggtc ctgcctaaag gactccgttag agcagaataa gaattgtgag 1920
 gaacctgtat gtgttgtgtc tgcgtgtcg tgcgtgttagc ggaaaatgg 1980
 cagaggaatg cgggcattca tcgcccgtc ggggtgtc tttgggtgtg gacttgg 2040
 tagcaaaacca aggtgtatcaa gtgagggaa aagaatggat gatgaacttt cagcgacaaa 2100
 aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa aaaaaaaaaa 2160

<210> 22
 <211> 522
 <212> PRT
 <213> Triticum aestivum

<400> 22
 Met Ala Arg Gly Gly Gly Asn Gly Glu Val Glu Leu Ser Val Gly Val
 1 5 10 15

Gly Gly Gly Gly Ala Gly Ala Gly Gly Ala Asp Ala Pro Ala Val Asp
 20 25 30

Ile Ser Leu Gly Arg Leu Ile Leu Ala Gly Met Val Ala Gly Gly Val
 35 40 45

Gln Tyr Gly Trp Ala Leu Gln Leu Ser Leu Leu Thr Pro Tyr Val Gln
 50 55 60

Thr Leu Gly Leu Ser His Ala Leu Thr Ser Phe Met Trp Leu Cys Gly
 65 70 75 80

Pro Ile Ala Gly Leu Val Val Gln Pro Cys Val Gly Leu Tyr Ser Asp
 85 90 95

Lys Cys Thr Ser Arg Trp Gly Arg Arg Arg Pro Phe Ile Leu Thr Gly
 100 105 110

Cys Ile Leu Ile Cys Ile Ala Val Val Val Val Gly Phe Ser Ala Asp
 115 120 125

Ile Gly Ala Ala Leu Gly Asp Ser Lys Glu Glu Cys Ser Leu Tyr His
 130 135 140

Gly Pro Arg Trp His Ala Ala Ile Val Tyr Val Leu Gly Phe Trp Leu
 145 150 155 160

Leu Asp Phe Ser Asn Asn Thr Val Gln Gly Pro Ala Arg Ala Leu Met
 165 170 175

Ala Asp Leu Ser Ala Gln His Gly Pro Ser Ala Ala Asn Ser Ile Phe
 180 185 190

Cys Ser Trp Met Ala Leu Gly Asn Ile Leu Gly Tyr Ser Ser Gly Ser
 195 200 205

Thr Asn Asn Trp His Lys Trp Phe Pro Phe Leu Arg Thr Arg Ala Cys
 210 215 220
 Cys Glu Ala Cys Ala Asn Leu Lys Gly Ala Phe Leu Val Ala Val Leu
 225 230 235 240
 Phe Leu Ala Phe Cys Leu Val Ile Thr Val Ile Phe Ala Lys Glu Ile
 245 250 255
 Pro Tyr Lys Ala Ile Ala Pro Leu Pro Thr Lys Ala Asn Gly Gln Val
 260 265 270
 Glu Val Glu Pro Thr Gly Pro Leu Ala Val Phe Lys Gly Phe Lys Asn
 275 280 285
 Leu Pro Pro Gly Met Pro Ser Val Leu Leu Val Thr Gly Leu Thr Trp
 290 295 300
 Leu Ser Trp Phe Pro Phe Ile Leu Tyr Asp Thr Asp Trp Met Gly Arg
 305 310 315 320
 Glu Ile Tyr His Gly Asp Pro Lys Gly Thr Pro Asp Glu Ala Asn Ala
 325 330 335
 Phe Gln Ala Gly Val Arg Ala Gly Ala Phe Gly Leu Leu Leu Asn Ser
 340 345 350
 Val Val Leu Gly Phe Ser Ser Phe Leu Ile Glu Pro Leu Cys Lys Arg
 355 360 365
 Leu Gly Pro Arg Val Val Trp Val Ser Ser Asn Phe Leu Val Cys Leu
 370 375 380
 Ser Met Ala Ala Ile Cys Ile Ile Ser Trp Trp Ala Thr Gln Asp Leu
 385 390 395 400
 His Gly Tyr Ile Gln His Ala Ile Thr Ala Ser Lys Glu Ile Lys Ile
 405 410 415
 Val Ser Leu Ala Leu Phe Ala Phe Leu Gly Ile Pro Leu Ala Ile Leu
 420 425 430
 Tyr Ser Val Thr Phe Ala Val Thr Ala Gln Leu Ala Ala Asn Arg Cys
 435 440 445
 Gly Gly Gln Trp Leu Cys Thr Gly Val Leu Asn Ile Ala Ile Ala Ile
 450 455 460
 Pro Gln Val Ile Ile Ala Leu Gly Ala Gly Pro Trp Asp Glu Leu Phe
 465 470 475 480
 Gly Lys Gly Asn Ile Pro Ala Phe Gly Val Ala Ser Ala Phe Ala Leu
 485 490 495
 Ile Gly Gly Ile Val Gly Ile Phe Leu Leu Pro Lys Ile Ser Arg Leu
 500 505 510
 Gln Phe Arg Ala Val Ser Gly Gly Gly His
 515 520
 <210> 23
 <211> 2030
 <212> DNA
 <213> Triticum aestivum

<400> 23

cggaagcgac gccgcgcggc ccaaggagga acagggcagc ggcgcgggg cggggaaagg 60
cgcatgaag ggcgcgccc agtggcggt ggtgctggcc tgcattggctc cgcgcgt 120
gcagttcgcc tggcgctcc agctccct cctcaccccc tacatccaga ctcttagaaat 180
agaccatgcc atggcgctt tcattggct ttgcgggccc attactggtt ttgtggttca 240
accgtgtgtt ggtgtctgga gtgacaagtcccgcttccaa tacgggagga gacggccgtt 300
cattttggct ggtatcgctc tgattttgc agctgttaact ttgtcggtt ttctgcaga 360
ccttggctac atgttaggag acaccactga gcaactgcaat acatacaag gtctacgata 420
tcgagctgct ttatatttca ttgtggatt ctggatgtc gacccgttca ataatacagt 480
tcaaggaccc gctcggtccc tccttagtca tctttcaggt cccgtatcaat gtaattcgcc 540
aatgtcaata ttctgctcat ggtatcgctt tggaaacgtt ctgggtttt cagctgggtc 600
gagttggaaat tggcacaatg ggtttccctt tctgtatgact agggcgtt gtgaagctt 660
tggtaatttgc aaacgactt tcttgattgc agttgttattc ttctgtttt gcatggctgt 720
taccccttac ttgtctgaaatg agatttccat gaaaccaaaatgatgcacagc agttatctga 780
ctcggtccct ctactgaacg gttctagaga tgatcatgat gcttcaatgt aacagactaa 840
tggaggactt tctaaccgtc atgctgtatc aaaccatgtc tcagctaact ccagtgcaga 900
tgcagggtcc aactcgaaca aggacatgt tgaggcttc aatgtatggac caggagcagt 960
tttggtaaaa attttgacta gcatgaggca tctacctcct ggaatgtatt ccgtgcttct 1020
ggttatggcc ctaacatggc tgcgtgggtt tcccttttc ctgtttgaca cggactggat 1080
ggggcgtgag gttatcagc gtgacccaaa aggaaacgcg agtggaaagga aagcttatga 1140
tgatgggttc cgagaagggtt cattttgtt gctattgaat tcagtcgtcc ttgggattgg 1200
ctctttcctt atcgatccat tatgccggat gattggtgca agattggttt gggcaatcag 1260
caacttcata gtgttgcct gcatgttggc tacaacaata ctaagttgga tctcctatga 1320
cctgtactcg agcaagcttc aacatattgt cggggcagat aaaacagtca agacctcagc 1380
gcttatttctt ttctcttcc tcggatttgc actctcgatc acttataatgtt ttccgttctc 1440
cgtgactgtc gagctgactg ccggaaacagg aggccgacaa ggttggcta ctggagttct 1500
gaatcttgc atcgatcgctc ctcagatagt agtgcactc ggagcaggcc catgggacaa 1560
gctcttgggg ggaggaaacg tccccctttt cggccctggcc tcggcttctc cgctagcagc 1620
cgagggtctc ggggtatca agctggccaa gttgtcgaac aattaccaat cggccggctt 1680
ccacatgggc tgaaccctaa agccccaaacg cagctgttgcgtt ggttacatc cagatgttta 1740
gttaccaatcc gcccgtttcc atattaatgt tcgtttatgat ggagatgatt tttttctcc 1800
tcttgctaga tacacagtttataaagactac agatcagata gactaggata aagagatagt 1860
ttttaggcct gtgtgcatac aagtgtcgtt gagaagttt aaaaatgttca cactgtttt 1920
ttgtactgttataatgttca aatttcatag atggccggat gtgtctgtt ccgataaaaa 1980
aaaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaaaa aaaaaaaaaaaa 2030

<210> 24

<211> 563

<212> PRT

<213> Triticum aestivum

<400> 24

Gly Ser Asp Ala Ala Arg Pro Lys Glu Glu Gln Gly Ser Gly Ala Gly
1 5 10 15

Ala Gly Glu Gly Gly Met Lys Gly Ala Pro Lys Trp Arg Val Val Leu
20 25 30

Ala Cys Met Val Ala Ala Gly Val Gln Phe Gly Trp Ala Leu Gln Leu
35 40 45

Ser Leu Leu Thr Pro Tyr Ile Gln Thr Leu Gly Ile Asp His Ala Met
50 55 60

Ala Ser Phe Ile Trp Leu Cys Gly Pro Ile Thr Gly Phe Val Val Gln
65 70 75 80

Pro Cys Val Gly Val Trp Ser Asp Lys Cys Arg Ser Lys Tyr Gly Arg
85 90 95

Arg Arg Pro Phe Ile Leu Ala Gly Cys Val Leu Ile Cys Ala Ala Val
100 105 110

Thr Leu Val Gly Phe Ser Ala Asp Leu Gly Tyr Met Leu Gly Asp Thr
 115 120 125
 Thr Glu His Cys Ser Thr Tyr Lys Gly Leu Arg Tyr Arg Ala Ala Phe
 130 135 140
 Ile Phe Ile Phe Gly Phe Trp Met Leu Asp Leu Ala Asn Asn Thr Val
 145 150 155 160
 Gln Gly Pro Ala Arg Ala Leu Leu Ala Asp Leu Ser Gly Pro Asp Gln
 165 170 175
 Cys Asn Ser Ala Asn Ala Ile Phe Cys Ser Trp Met Ala Val Gly Asn
 180 185 190
 Val Leu Gly Phe Ser Ala Gly Ala Ser Gly Asn Trp His Lys Trp Phe
 195 200 205
 Pro Phe Leu Met Thr Arg Ala Cys Cys Glu Ala Cys Gly Asn Leu Lys
 210 215 220
 Ala Ala Phe Leu Ile Ala Val Val Phe Leu Leu Phe Cys Met Ala Val
 225 230 235 240
 Thr Leu Tyr Phe Ala Glu Glu Ile Pro Leu Glu Pro Lys Asp Ala Gln
 245 250 255
 Gln Leu Ser Asp Ser Ala Pro Leu Leu Asn Gly Ser Arg Asp Asp His
 260 265 270
 Asp Ala Ser Ser Glu Gln Thr Asn Gly Gly Leu Ser Asn Gly His Ala
 275 280 285
 Asp Ala Asn His Val Ser Ala Asn Ser Ser Ala Asp Ala Gly Ser Asn
 290 295 300
 Ser Asn Lys Asp Asp Val Glu Ala Phe Asn Asp Gly Pro Gly Ala Val
 305 310 315 320
 Leu Val Lys Ile Leu Thr Ser Met Arg His Leu Pro Pro Gly Met Tyr
 325 330 335
 Ser Val Leu Leu Val Met Ala Leu Thr Trp Leu Ser Trp Phe Pro Phe
 340 345 350
 Phe Leu Phe Asp Thr Asp Trp Met Gly Arg Glu Val Tyr His Gly Asp
 355 360 365
 Pro Lys Gly Asn Ala Ser Glu Arg Lys Ala Tyr Asp Asp Gly Val Arg
 370 375 380
 Glu Gly Ala Phe Gly Leu Leu Leu Asn Ser Val Val Leu Gly Ile Gly
 385 390 395 400
 Ser Phe Leu Ile Asp Pro Leu Cys Arg Met Ile Gly Ala Arg Leu Val
 405 410 415
 Trp Ala Ile Ser Asn Phe Ile Val Phe Ala Cys Met Leu Ala Thr Thr
 420 425 430
 Ile Leu Ser Trp Ile Ser Tyr Asp Leu Tyr Ser Ser Lys Leu Gln His
 435 440 445

Ile Val Gly Ala Asp Lys Thr Val Lys Thr Ser Ala Leu Ile Leu Phe
 450 455 460
 Ser Leu Leu Gly Leu Pro Leu Ser Ile Thr Tyr Ser Val Pro Phe Ser
 465 470 475 480
 Val Thr Ala Glu Leu Thr Ala Gly Thr Gly Gly Gly Gln Gly Leu Ala
 485 490 495
 Thr Gly Val Leu Asn Leu Ala Ile Val Ala Pro Gln Ile Val Val Ser
 500 505 510
 Leu Gly Ala Gly Pro Trp Asp Lys Leu Leu Gly Gly Asn Val Pro
 515 520 525
 Ala Phe Ala Leu Ala Ser Val Phe Ser Leu Ala Ala Gly Val Leu Ala
 530 535 540
 Val Ile Lys Leu Pro Lys Leu Ser Asn Asn Tyr Gln Ser Ala Gly Phe
 545 550 555 560
 His Met Gly

<210> 25
 <211> 501
 <212> PRT
 <213> Daucus carota
 <400> 25
 Met Ala Gly Pro Glu Ala Asp Arg Asn Arg His Arg Gly Gly Ala Thr
 1 5 10 15
 Ala Ala Pro Pro Pro Arg Ser Arg Val Ser Leu Arg Leu Leu Arg
 20 25 30
 Val Ala Ser Val Ala Cys Gly Ile Gln Phe Gly Trp Ala Leu Gln Leu
 35 40 45
 Ser Leu Leu Thr Pro Tyr Val Gln Glu Leu Gly Ile Pro His Ala Trp
 50 55 60
 Ser Ser Ile Ile Trp Leu Cys Gly Pro Leu Ser Gly Leu Leu Val Gln
 65 70 75 80
 Pro Ile Val Gly His Met Ser Asp Gln Cys Thr Ser Lys Tyr Gly Arg
 85 90 95
 Arg Arg Pro Phe Ile Val Ala Gly Gly Thr Ala Ile Ile Leu Ala Val
 100 105 110
 Ile Ile Ile Ala His Ser Ala Asp Ile Gly Gly Leu Leu Gly Asp Thr
 115 120 125
 Ala Asp Asn Lys Thr Met Ala Ile Val Ala Phe Val Ile Gly Phe Trp
 130 135 140
 Ile Leu Asp Val Ala Asn Asn Met Thr Gln Gly Pro Cys Arg Ala Leu
 145 150 155 160

Leu Ala Asp Leu Thr Gly Asn Asp Ala Arg Arg Thr Arg Val Ala Asn
 165 170 175
 Ala Tyr Phe Ser Leu Phe Met Ala Ile Gly Asn Val Leu Gly Tyr Ala
 180 185 190
 Thr Gly Ala Tyr Ser Gly Trp Tyr Lys Val Phe Pro Phe Ser Leu Thr
 195 200 205
 Ser Ser Cys Thr Ile Asn Cys Ala Asn Leu Lys Ser Ala Phe Tyr Ile
 210 215 220
 Asp Ile Ile Phe Ile Ile Thr Thr Tyr Ile Ser Ile Ser Ala Ala
 225 230 235 240
 Lys Glu Arg Pro Arg Ile Ser Ser Gln Asp Gly Pro Gln Phe Ser Glu
 245 250 255
 Asp Gly Thr Ala Gln Ser Gly His Ile Glu Glu Ala Phe Leu Trp Glu
 260 265 270
 Leu Phe Gly Thr Phe Arg Leu Leu Pro Gly Ser Val Trp Val Ile Leu
 275 280 285
 Leu Val Thr Cys Leu Asn Trp Ile Gly Trp Phe Pro Phe Ile Leu Phe
 290 295 300
 Asp Thr Asp Trp Met Gly Arg Glu Ile Tyr Gly Gly Glu Pro Asn Gln
 305 310 315 320
 Gly Gln Ser Tyr Ser Asp Gly Val Arg Met Gly Ala Phe Gly Leu Met
 325 330 335
 Met Asn Ser Val Val Leu Gly Ile Thr Ser Val Leu Met Glu Lys Leu
 340 345 350
 Cys Arg Ile Trp Gly Ser Gly Phe Met Trp Gly Leu Ser Asn Ile Leu
 355 360 365
 Met Thr Ile Cys Phe Phe Ala Met Leu Leu Ile Thr Phe Ile Ala Lys
 370 375 380
 Asn Met Asp Tyr Gly Thr Asn Pro Pro Asn Gly Ile Val Ile Ser
 385 390 395 400
 Ala Leu Ile Val Phe Ala Ile Leu Gly Ile Pro Leu Ala Ile Thr Tyr
 405 410 415
 Ser Val Pro Tyr Ala Leu Val Ser Thr Arg Ile Glu Ser Leu Gly Leu
 420 425 430
 Gly Gln Gly Leu Ser Met Gly Val Leu Asn Leu Ala Ile Val Val Pro
 435 440 445
 Gln Val Ile Val Ser Leu Gly Ser Gly Pro Trp Asp Gln Leu Phe Gly
 450 455 460
 Gly Gly Asn Ser Pro Ala Phe Val Val Ala Ala Leu Ser Ala Phe Ala
 465 470 475 480
 Ala Gly Leu Ile Ala Leu Ile Ala Ile Arg Arg Pro Arg Val Asp Lys
 485 490 495

Ser Arg Leu His His
500

<210> 26
<211> 537

<212> PRT

<213> Oryza sativa

<400> 26

Met Ala Arg Gly Ser Gly Ala Gly Gly Gly Gly Gly Gly Gly
1 5 10 15

Gly Leu Glu Leu Ser Val Gly Val Gly Gly Gly Ala Arg Gly Gly
20 25 30

Gly Gly Gly Glu Ala Ala Ala Ala Val Glu Thr Ala Ala Pro Ile Ser
35 40 45

Leu Gly Arg Leu Ile Leu Ser Gly Met Val Ala Gly Gly Val Gln Tyr
50 55 60

Gly Trp Ala Leu Gln Leu Ser Leu Leu Thr Pro Tyr Val Gln Thr Leu
65 70 75 80

Gly Leu Ser His Ala Leu Thr Ser Phe Met Trp Leu Cys Gly Pro Ile
85 90 95

Ala Gly Met Val Val Gln Pro Cys Val Gly Leu Tyr Ser Asp Arg Cys
100 105 110

Thr Ser Lys Trp Gly Arg Arg Arg Pro Tyr Ile Leu Thr Gly Cys Val
115 120 125

Leu Ile Cys Leu Ala Val Val Val Ile Gly Phe Ser Ala Asp Ile Gly
130 135 140

Tyr Ala Met Gly Asp Thr Lys Glu Asp Cys Ser Val Tyr His Gly Ser
145 150 155 160

Arg Trp His Ala Ala Ile Val Tyr Val Leu Gly Phe Trp Leu Leu Asp
165 170 175

Phe Ser Asn Asn Thr Val Gln Gly Pro Ala Arg Ala Leu Met Ala Asp
180 185 190

Leu Ser Gly Arg His Gly Pro Gly Thr Ala Asn Ser Ile Phe Cys Ser
195 200 205

Trp Met Ala Met Gly Asn Ile Leu Gly Tyr Ser Ser Gly Ser Thr Asn
210 215 220

Asn Trp His Lys Trp Phe Pro Phe Leu Lys Thr Arg Ala Cys Cys Glu
225 230 235 240

Ala Cys Ala Asn Leu Lys Gly Ala Phe Leu Val Ala Val Ile Phe Leu
245 250 255

Ser Leu Cys Leu Val Ile Thr Leu Ile Phe Ala Lys Glu Val Pro Phe
260 265 270

Lys Gly Asn Ala Ala Leu Pro Thr Lys Ser Asn Glu Pro Ala Glu Pro
275 280 285

Glu Gly Thr Gly Pro Leu Ala Val Leu Lys Gly Phe Arg Asn Leu Pro
 290 295 300
 Thr Gly Met Pro Ser Val Leu Ile Val Thr Gly Leu Thr Trp Leu Ser
 305 310 315 320
 Trp Phe Pro Phe Ile Leu Tyr Asp Thr Asp Trp Met Gly Arg Glu Ile
 325 330 335
 Tyr His Gly Asp Pro Lys Gly Thr Asp Pro Gln Ile Glu Ala Phe Asn
 340 345 350
 Gln Gly Val Arg Ala Gly Ala Phe Gly Leu Leu Leu Asn Ser Ile Val
 355 360 365
 Leu Gly Phe Ser Ser Phe Leu Ile Glu Pro Met Cys Arg Lys Val Gly
 370 375 380
 Pro Arg Val Val Trp Val Thr Ser Asn Phe Leu Val Cys Ile Ala Met
 385 390 395 400
 Ala Ala Thr Ala Leu Ile Ser Phe Trp Ser Leu Lys Asp Phe His Gly
 405 410 415
 Thr Val Gln Lys Ala Ile Thr Ala Asp Lys Ser Ile Lys Ala Val Cys
 420 425 430
 Leu Val Leu Phe Ala Phe Leu Gly Val Pro Leu Ala Val Leu Tyr Ser
 435 440 445
 Val Pro Phe Ala Val Thr Ala Gln Leu Ala Ala Thr Arg Gly Gly
 450 455 460
 Gln Gly Leu Cys Thr Gly Val Leu Asn Ile Ser Ile Val Ile Pro Gln
 465 470 475 480
 Val Val Ile Ala Leu Gly Ala Gly Pro Trp Asp Glu Leu Phe Gly Lys
 485 490 495
 Gly Asn Ile Pro Ala Phe Gly Leu Ala Ser Gly Phe Ala Leu Ile Gly
 500 505 510
 Gly Val Ala Gly Ile Phe Leu Leu Pro Lys Ile Ser Lys Arg Gln Phe
 515 520 525
 Trp Ser Val Ser Met Gly Gly His
 530 535
 <210> 27
 <211> 533
 <212> PRT
 <213> Ricinus communis
 <400> 27
 Met Gln Ser Ser Thr Ser Lys Glu Asn Lys Gln Pro Pro Ser Ser Gln
 1 5 10 15
 Pro His Pro Pro Pro Leu Met Val Ala Gly Ala Ala Glu Pro Asn Ser
 20 25 30
 Ser Pro Leu Arg Lys Val Val Met Val Ala Ser Ile Ala Ala Gly Ile
 35 40 45

Gln Phe Gly Trp Ala Leu Gln Leu Ser Leu Leu Thr Pro Tyr Val Gln
 50 55 60
 Leu Leu Gly Ile Pro His Thr Trp Ala Ala Phe Ile Trp Leu Cys Gly
 65 70 75 80
 Pro Ile Ser Gly Met Leu Val Gln Pro Ile Val Gly Tyr His Ser Asp
 85 90 95
 Arg Cys Thr Ser Arg Phe Gly Arg Arg Pro Phe Ile Ala Ser Gly
 100 105 110
 Ala Ala Phe Val Ala Ile Ala Val Phe Leu Ile Gly Tyr Ala Ala Asp
 115 120 125
 Leu Gly His Leu Ser Gly Asp Ser Leu Asp Lys Ser Pro Lys Thr Arg
 130 135 140
 Ala Ile Ala Ile Phe Val Val Gly Phe Trp Ile Leu Asp Val Ala Asn
 145 150 155 160
 Asn Met Leu Gln Gly Pro Cys Arg Ala Leu Leu Ala Asp Leu Ser Gly
 165 170 175
 Thr Ser Gln Lys Lys Thr Arg Thr Ala Asn Ala Leu Phe Ser Phe Phe
 180 185 190
 Met Ala Val Gly Asn Val Leu Gly Tyr Ala Ala Gly Ala Tyr Thr His
 195 200 205
 Leu Tyr Lys Leu Phe Pro Phe Thr Lys Thr Thr Ala Cys Asp Val Tyr
 210 215 220
 Cys Ala Asn Leu Lys Ser Cys Phe Phe Ile Ser Ile Val Leu Leu Leu
 225 230 235 240
 Ser Leu Thr Val Leu Ala Leu Ser Tyr Val Lys Glu Lys Pro Trp Ser
 245 250 255
 Pro Asp Gln Ala Val Asp Asn Ala Glu Asp Asp Thr Ala Ser Gln Ala
 260 265 270
 Ser Ser Ser Ala Gln Pro Met Pro Phe Phe Gly Glu Ile Leu Gly Ala
 275 280 285
 Phe Lys Asn Leu Lys Arg Pro Met Trp Ile Leu Leu Leu Val Thr Cys
 290 295 300
 Leu Asn Trp Ile Ala Trp Phe Pro Phe Leu Leu Phe Asp Thr Asp Trp
 305 310 315 320
 Met Gly Arg Glu Val Tyr Gly Gly Asp Ser Ser Gly Ser Ala Glu Gln
 325 330 335
 Leu Lys Leu Tyr Asp Arg Gly Val Arg Ala Gly Ala Leu Gly Leu Met
 340 345 350
 Leu Asn Ser Val Val Leu Gly Phe Thr Ser Leu Gly Val Glu Val Leu
 355 360 365
 Ala Arg Gly Val Gly Gly Val Lys Arg Leu Trp Gly Ile Val Asn Phe
 370 375 380

Val Leu Ala Val Cys Leu Ala Met Thr Val Leu Val Thr Lys Gln Ala
 385 390 395 400
 Glu Ser Thr Arg Arg Phe Ala Thr Val Ser Gly Gly Ala Lys Val Pro
 405 410 415
 Leu Pro Pro Pro Ser Gly Val Lys Ala Gly Ala Leu Ala Leu Phe Ala
 420 425 430
 Val Met Gly Val Pro Gln Ala Ile Thr Tyr Ser Ile Pro Phe Ala Leu
 435 440 445
 Ala Ser Ile Phe Ser Asn Thr Ser Gly Ala Gly Gln Gly Leu Ser Leu
 450 455 460
 Gly Val Leu Asn Leu Ser Ile Val Ile Pro Gln Met Ile Val Ser Val
 465 470 475 480
 Ala Ala Gly Pro Trp Asp Ala Leu Phe Gly Gly Asn Leu Pro Ala
 485 490 495
 Phe Val Val Gly Ala Val Ala Ala Leu Ala Ser Gly Ile Phe Ala Leu
 500 505 510
 Thr Met Leu Pro Ser Pro Gln Pro Asp Met Pro Ser Ala Lys Ala Leu
 515 520 525
 Thr Ala Ala Phe His
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 <210> 28
 <211> 523
 <212> PRT
 <213> Vicia faba
 <400> 28
 Met Glu Pro Leu Ser Ser Thr Lys Gln Ile Asn Asn Asn Asn Leu
 1 5 10 15
 Ala Lys Pro Ser Ser Leu His Val Glu Thr Gln Pro Leu Glu Pro Ser
 20 25 30
 Pro Leu Arg Lys Ile Met Val Val Ala Ser Ile Ala Ala Gly Val Gln
 35 40 45
 Phe Gly Trp Ala Leu Gln Leu Ser Leu Leu Thr Pro Tyr Val Gln Leu
 50 55 60
 Leu Gly Ile His His Thr Trp Ala Ala Tyr Ile Trp Leu Cys Gly Pro
 65 70 75 80
 Ile Ser Gly Met Leu Val Gln Pro Ile Val Gly Tyr His Ser Asp Arg
 85 90 95
 Cys Thr Ser Arg Phe Gly Arg Arg Pro Phe Ile Ala Ala Gly Ser
 100 105 110
 Ile Ala Val Ala Ile Ala Val Phe Leu Ile Gly Tyr Ala Ala Asp Leu
 115 120 125
 Gly His Ser Phe Gly Asp Ser Leu Asp Gln Lys Val Arg Pro Arg Ala
 130 135 140

Ile Gly Ile Phe Val Val Gly Phe Trp Ile Leu Asp Val Ala Asn Asn
145 150 155 160

Met Leu Gln Gly Pro Cys Arg Ala Leu Leu Gly Asp Leu Cys Ala Gly
165 170 175

Asn Gln Arg Lys Thr Arg Asn Ala Asn Ala Phe Phe Ser Phe Phe Met
180 185 190

Ala Val Gly Asn Val Leu Gly Tyr Ala Ala Gly Ala Tyr Ser Lys Leu
195 200 205

Tyr His Val Phe Pro Phe Thr Lys Thr Lys Ala Cys Asn Val Tyr Cys
210 215 220

Ala Asn Leu Lys Ser Cys Phe Phe Leu Ser Ile Ala Leu Leu Thr Val
225 230 235 240

Leu Ala Thr Ser Ala Leu Ile Tyr Val Lys Glu Thr Ala Leu Thr Pro
245 250 255

Glu Lys Thr Val Val Thr Thr Glu Asp Gly Gly Ser Ser Gly Gly Met
260 265 270

Pro Cys Phe Gly Gln Leu Ser Gly Ala Phe Lys Glu Leu Lys Arg Pro
275 280 285

Met Trp Ile Leu Leu Leu Val Thr Cys Leu Asn Trp Ile Ala Trp Phe
290 295 300

Pro Phe Leu Leu Phe Asp Thr Asp Trp Met Gly Lys Glu Val Tyr Gly
305 310 315 320

Gly Thr Val Gly Glu Gly His Ala Tyr Asp Met Gly Val Arg Glu Gly
325 330 335

Ala Leu Gly Leu Met Leu Asn Ser Val Val Leu Gly Ala Thr Ser Leu
340 345 350

Gly Val Asp Ile Leu Ala Arg Gly Val Gly Val Lys Arg Leu Trp
355 360 365

Gly Ile Val Asn Phe Leu Leu Ala Ile Cys Leu Gly Leu Thr Val Leu
370 375 380

Val Thr Lys Leu Ala Gln His Ser Arg Gln Tyr Ala Pro Gly Thr Gly
385 390 395 400

Ala Leu Gly Asp Pro Leu Pro Pro Ser Glu Gly Ile Lys Ala Gly Ala
405 410 415

Leu Thr Leu Phe Ser Val Leu Gly Val Pro Leu Ala Ile Thr Tyr Ser
420 425 430

Ile Pro Phe Ala Leu Ala Ser Ile Phe Ser Ser Thr Ser Gly Ala Gly
435 440 445

Gln Gly Leu Ser Leu Gly Val Leu Asn Leu Ala Ile Val Ile Pro Gln
450 455 460

Met Phe Val Ser Val Leu Ser Gly Pro Trp Asp Ala Leu Phe Gly Gly
465 470 475 480

B

Gly Asn Leu Pro Ala Phe Val Val Gly Ala Val Ala Ala Leu Ala Ser
485 490 495

Gly Ile Leu Ser Ile Ile Leu Leu Pro Ser Pro Pro Pro Asp Met Ala
500 505 510

Lys Ser Val Ser Ala Thr Gly Gly Phe His
515 520

1000 900 800 700 600 500 400 300 200 100